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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,621	03/05/2001	Seppo Noponen	1101.071	3648

7590 03/29/2005  
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EXAMINER

LAO, LUN S

ART UNIT	PAPER NUMBER
2643	

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/786,621

Applicant(s)

NOPONEN ET AL.

Examiner

Lun-See Lao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 6-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Introduction*

1. This action is in response to restriction or election requirement filed on 02-03-2005.

Applicant elects group 2, claims 6-15 drawn to class 381, subclass 345 without traverse.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 6-8, 9-11 and 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Marquiss (US PAT. 4,385,210).

Consider claim 6 Marquiss teaches a pillar loudspeaker intended for sound reproduction indoors and outdoors, which pillar loudspeaker includes a cabinet construction supporting a diaphragm ( see fig.1 ,13, 14), at least one operating device (see fig.5, 29) for driving the diaphragm, which is operationally straight, unified, and relatively stiff single component, which tall vertically and narrow horizontally such a way that the height H of diaphragm (see fig.1, 13-14) is at least three times, preferably five times greater than its width W, and in which the diaphragm (see fig.1, 13-14) is arranged to vibrate mechanically by means of the force of operating device (see fig.5,

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29) to produce a sound in the free space, the cabinet construction being arranged to prevent acoustic feedback in such a way that the cabinet construction encloses one side of diaphragm (see fig.1, 13-14) within the other side having an air connection to the free space, characterized in that the loudspeaker (see figs. 1,3,5,8,10 and abstract) includes a port arrangement (see fig.2, 64), comprising at least one port (see fig.2 (64)) in front of diaphragm (see fig.1, 13-14) in the construction forming chamber (see fig.2, 66) and leading away from chamber (see fig.2, 64), allow air to pass from chamber (see fig.2, 64) the free space (see figs. 1,3,5,8,10 and col. 10 lines 6-16).

Consider claims 7-8, Marquiss teaches a pillar loudspeaker of characterized in that diaphragm (see fig.1, 13-14) is placed at the side of cabinet (see figs. 1-2), which is arranged to be installed with attachment devices (see fig.5, 17) at distance from and facing wall surface (see fig.5, 16), at least one port being formed between an edge of the side of cabinet and wall surface (see figs. 1-3, 5,8,10 (16) and col.4 lines 30-66); and a pillar loudspeaker characterized in that the cabinet construction includes an enclosure construction enclosing diaphragm (see fig.1, 13-14), in which enclosure there port on the side opposite diaphragm (see fig2. 1-3,5,8,10 and col.4 lines 30-66, col.10 line 6-16).

Consider claims 10-11, Marquiss teaches a pillar loudspeaker of characterized in that the loudspeaker includes several point-like operating devices (see fig.5, 29) and that diaphragm (13) has a curved cross-section, stiffen it (see col. 4, line 30-col.5 line 45); and the loudspeaker of characterized in that the loudspeaker includes one more

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high linear ("normalizing spring") operating devices (see fig.5, 29 and col.5 line 40-col.6 line 31).

Consider claim 13-14, Marquiss teaches that the loudspeaker of characterized in that voice coil element (see figs. 5-7, (29)), which moves in an air port of the body of a said linear operating device (29) and is elongated in its circumferential plane, is attached either directly or indirectly to the base of diaphragm (13 and see col. 5 line 40-col. 6 line 62); and a loudspeaker of characterized in that the body of linear operating device (see figs, 5-7, 29) is a unified component, which forms two high ports between the magnetic poles, with high voice coil (29) being fitted into these ports (see figs.5-7,10 line 40-col.6 line 31 and col.6 line 32-col.7 line 57).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marquiss (US PAT 4,385,210).

Consider claim 9, Marquiss does not clearly teach a pillar loudspeaker of characterized in that the width d of said 12- 30 % on the width W of said diaphragm.

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However, Marquiss (210)'s fig.5 illustrate an approximate port to diaphragm with characterized in that the width  $d$  of said approximately 30 % on the width  $W$  of said diaphragm (see figs. 1-3, 5, 8, 10).

Therefore, it would been obvious that Marquiss could have an approximate port to diaphragm with rate in this range 12-30% for market demand.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marquiss (US PAT 4,385,210) in view of Zelinka et al (USPAT. 6,097,830).

Consider claim 12, Marquiss does not clearly teach a loudspeaker of characterized in that said diaphragm comprises a composite material, molded, or laminated construction, its material being aluminum, kevlar, carbon-fibre, urethane, or wood fibre.

However, Zelinka teaches a loudspeaker of characterized in that said diaphragm comprises a composite material, molded, or laminated construction, its material being aluminum (see col.6 line 55-col.7 line32),

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Marquiss and Zelinka to provide magnetic acoustic transducers with enhanced sound reproduction characteristics, particularly reduced audible distortion and increased maximum sound pressure level.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marquiss (US PAT 4,385,210) in view of Mori (JP 59-086997).

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Consider claim 15, Marquiss does not clearly teach a loudspeaker of the characterized the body of high voice coil is made from aluminum.

However, Mori teaches a loudspeaker of the characterized the body of high voice coil is made from aluminum (see fig.1, and constitution).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Marquiss and Mori to provide its heat resistance.

### ***Conclusion***

8 The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Marquiss (US PAT 4,792,978 and 4,856,071) and Frren (US PAT. 5,802,190) are recited to show other related Method for sound reproduction and pillar loudspeaker.

9. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao, Lun-See whose telephone number is (703) 305-2259 The examiner can normally be reached on Monday-Friday from 8:00 to 6:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's

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supervisor, Curtis Kuntz, can be reached on (703) 305-4708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (703) 306-0377.

Lao, Lun-See  
Patent Examiner  
US Patent and Trademark Office  
Crystal Park 2  
(703) 305-2259

  
**DUC NGUYEN**  
**PRIMARY EXAMINER**